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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/442,756	11/18/99	BEUTH R	9350-0144-0

IM22/0514
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EXAMINER	
HON,S	
ART UNIT	PAPER NUMBER
1772	8

DATE MAILED: 05/14/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Offic Action Summary	Application No. 09/442,756	Applicant(s) BEUTH ET AL.	
	Examiner Sow-Fun Hon	Art Unit 1772	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-12 and 14-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-12 and 14-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The cancellation of claims 3, 13 in Paper # 7 (filed 02/23/01) are acknowledged.

Withdrawn Rejections

2. The 35 U.S.C. 112, 2nd paragraph rejection in Paper # 6, paragraph 2 (mailed 11/08/00) of claims 1-16 has been withdrawn due to Applicant's amendment in Paper # 7 (filed 02/23/01).

Rejections Repeated

3. The 35 U.S.C. 102(b) rejection of claims 1-10, 13-16 as being anticipated by Yu is repeated for the same reasons previously of record in Paper # 6, paragraph 5 (mailed 11/08/00).

4. The 35 U.S.C. 103(a) rejection of claims 1-2, 4-12, 14-16 over Yu in view of Siour et al. is repeated for the same reasons previously of record in Paper # 6, paragraph 7 (mailed 11/08/00).

New Rejections

Claim Rejections - 35 USC § 112

5. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. It is unclear what the method steps are.

New Rejections

Claim Rejections - 35 USC § 103

6. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Douchet et al. (US Patent 5,472,754) in view of Yu.

Douchet et al. have a plastic material hose for fluids used in motor vehicles, such as the fuel or the windshield washer liquid (column 1, lines 1-5) thus demonstrating that a materials for a fuel hose may also be used in a washer fluid hose in motor vehicles. Douchet et al. teach a method step of manufacturing the hose (column 1, lines 35-46). Douchet et al. also teach polyamides such as PA 11 and PA 12 (column 2, lines 1-5), as part of the material composition, but fail to teach the claimed specific composition.

Yu has been discussed in Paper # 6, paragraph 5 (mailed 11/08/00), and is rediscussed here. Yu has a polymeric blend and a fuel hose (pipe) made of this blend (column 1, lines 6-8). The blend comprises a polyamide and a polyolefin with functional groups selected from the group consisting of carboxyl groups, esters, anhydrides and carboxylates. The carbon atom number of the carboxylic acid is preferably not lower than 10. The polyolefin is preferably 5 to 15 % of ethylene ethyl acrylate with respect to the total weight of the whole blend (column 1, lines 35-68) and 0.1 to 30 weight % of maleic anhydride functionalized ethylene-propylene. The blend also preferably comprises 0.1 to 40 % nylon 12 (column 2, lines 4-23).

Yu teaches that plasticizers cannot be used because they are extracted by gasoline which is a very good solvent of plasticizers (column 1, lines 22-24), hence teaching the importance of the minimization of gasoline extractables. Yu also teaches the importance of flexibility in the hose (column 1, lines 19-26).

Because Yu teaches the use of the blend in a fuel hose with a minimum of gasoline extractables while maintaining flexibility, it would have been obvious to one of ordinary skill in the art to have used the composition taught by Yu in the invention of Douchet et al. in order to obtain a fluid-carrying hose for use in motor vehicles with improved non-eluting properties and sustained flexibility.

7. Claims 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu in view of Toyobo (Derwent Abstract JP05255589A).

Yu has been discussed above. Although Yu teaches the need for flexibility of the hose which is used in automobile applications (column 1, lines 10-25), Yu fails to teach a range of tensile modulus of elasticity.

Toyobo has a polyamide blended with olefinic copolymer and polyethylene to be used for automobile components, wherein the composition maintains its bending modulus of elasticity when flexed. Toyobo teaches that the tensile modulus of elasticity of the composition is at least 2000 kg/cm^2 (196 N/mm^2). It is mere routine optimization to obtain the flexibility for the desired end-use unless unexpected results arising from the range of tensile modulus of elasticity values were demonstrated. See In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP § 716.02(d) - § 716.02(e).

Because Toyobo teaches that the composition maintains its bending modulus of elasticity when flexed if the tensile modulus of elasticity of the composition is at least 196 N/mm^2, and that the composition is for use as an automobile component, it would have been obvious to one of ordinary skill in the art to have used the teachings of Toyobo in the invention of Yu in order to

obtain an automotive tubing with the desired flexibility while maintaining its bending modulus of elasticity.

Response to Arguments

8. Applicant's arguments in Paper # 7 (filed 02/23/01) with regards to the valid use of Yu have been fully considered but they are not persuasive.

a. Although claim 1 is not limited to copolymides prepared from ε-caprolactam and other polyamide materials, it does not preclude them.

b. With regards to the flexibility of the material involved, Applicant is reminded that no patentable weight is given to the limitation "flexibility" unless values were used to define the property. Yu teaches that the material has to be flexible.

c. With regards to the limitation of "not more than 2 % by weight of extractables when the material is subjected to hot 100 % ethanol under reflux conditions", Yu teaches the desireability of the non-use of plasticizers, which cannot be used since they are extracted by gasoline, while maintaining flexibility, thus teaching the desireability of zero extractables.

d. New claim 18 does not preclude the inclusion of PA 6 in claimed composition due to the use of the "comprising" terminology in the claim. Yu also does not teach the requirement for the inclusion of nylon 6 in the blend.

9. Applicant's arguments in Paper # 7 (filed 02/23/01) with regards to the valid use of Siour et al. as a valid reference have been fully considered but they are not persuasive.

Siour et al. have a multilayer gasoline tube (pipe) which comprises of an inner layer of polyamide blended with polyolefin (abstract). The tube can also be used for filling and feeding the tanks of automobiles (column 2, lines 1-5). One of ordinary skill in the art would have known that these tubes are corrugated in certain areas or throughout as seen at gas stations. Siour et al. fail to teach the specific claimed inner layer blend of polyamide and polyolefin.

Yu has been discussed above and teaches the specific claimed blend of polyamide and polyolefin with zero plasticizers. Because Yu teaches the use of the blend in a fuel hose with a minimum of gasoline extractables while maintaining flexibility, it would have been obvious to one of ordinary skill in the art to have used the plasticizer-free composition of Yu as the inner layer of the tube of Siour et al. in order to obtain a gasoline tube with the desired non-eluting properties and flexibility for the desired end-use.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH
05/03/01

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

5/1/01